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Title : Bowhead whale (*Balaena mysticetus*) behavior: Activity time budgets in spring, summer and early autumn

Category : Behavior

Student : Not Applicable

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Abstract : There have been many descriptions of specific cetacean behaviors, but few attempts to quantify their activities, especially for bowhead whales. We quantified the proportion of time that whales engaged in feeding, traveling, socializing and other activities during spring east of Point Barrow, Alaska; summer in the Canadian Beaufort Sea; and early autumn in the Central Beaufort Sea, variably in 1980 through 2000. Observers (3-4) in a twin-engine aircraft circled above whales at altitudes ≥ 460 meters, and recorded behaviors and activities by eye, 8-10X binoculars, and video. We summarized activities of whales during the first 20 min. of 55, 90, and 80 behavioral observation sessions in spring, summer, and early autumn, respectively. In spring, feeding accounted for about 1% of activities, traveling (generally eastward) 81%, socializing 7%, and 11% other. In summer, activities were dramatically different, with 73% feeding, 7% traveling, 15% socializing, and 5% other. In early autumn, feeding was still the most common activity in four of five years, and averaged 47% over the 5 years. Traveling (generally westward) was second-most, at 31%, and increased as the season progressed. Socializing accounted for 17% and other activities for 5% of time. There was much intra- and inter-season variability in activities and locations, with some but not all activities related to apparent prey biomass, as determined from ancillary studies. While feeding is infrequent in spring east of Point Barrow and very common in summer in the Canadian Beaufort Sea, the apparently intermediate importance of the Central Beaufort Sea for early autumn feeding varies considerably from year to year. Although sporadic and variable, feeding there may be important to some individual bowhead whales in certain years. [Supported by U.S. Minerals Management Service.]